Polar Bear Conservation, Management and Research in Canada

Canada

June 2007

Context…

- Canada is home to 15,000 polar bears (two-thirds of the world total)
- 13 Canadian subpopulations: three shared with Greenland and one shared with the United States.
- 5 subpopulations appear to be stable/increasing, 5 decreasing, whereas the trends for 3 subpopulations are unknown
- Not listed under federal species at risk legislation
  - Status is currently being assessed by independent scientific body; assessment expected in 2008
- A Government of Canada listing or not listing would be based on the independent scientific advice and relevant socio-economic factors.
- A legal listing would trigger subsequent activities (e.g., recovery planning).

Polar Bear Management in Canada…

- Provincial and territorial jurisdictions, together with wildlife boards established under Land Claims Agreements, are responsible for management
- A Canadian Wildlife Directors' Committee provides oversight
- Co-management approach brings together users and management agencies to review scientific and traditional knowledge, and make decisions together
- Users are actively involved in the setting of quotas, distribution of quota tags, research, and participation on national committees
- Stewardship involves continued use and benefit from a resource
- Permitting is not only for international movement but also for inter-jurisdictional movement in Canada.

Polar Bear Harvest…

- Annual harvest within identified sustainable level is permitted
  - Average annual quota is between 600-700 bears, but actual harvest is always less
  - Harvest levels have declined since the 1960s
- Each community receives a share of the total quota available for each subpopulation. Most harvest is by Inuit for subsistence purposes. 78% is subsistence harvest.
- Harvest is strictly regulated. All polar bears killed as a result of human activity, including subsistence and sport hunt, illegal kills and defense kills, are accounted for within sustainable harvest limits
  - Illegal harvest currently accounts for <1% of total harvest
- Strong incentives for compliance: non-compliance may result in reduced total quota

Outfitted Harvest (Sport Hunt)…

- Polar bear hunt is important not only to the culture, but also to the economy of some Inuit of northern Canada
  - Only aboriginal outfitters using a dog-team have the right to conduct outfitted harvest
- Outfitted hunting is not additive cause of mortality:
  - Communities allocate quota tags to subsistence or sport hunts
  - Sport hunt is included in the quotas
- Each outfitted hunt contributes approximately $19K CDN to the economy of northern communities
- Majority of non-resident outfitted hunters are US citizens
  - 69% in Canada

Trade…

- Export of polar bears from Canada is governed by the provisions of the Convention on International Trade of Endangered Species (CITES)
  - Required permits ensure that bear was legally obtained and that export will not be detrimental to survival of species
- CITES permitting is effective, and a 2003 review by the United Nations Environment Programme found that current international trade is not threatening survival
- The 1994 amendments to the US *Marine Mammal Protection Act* allow US citizens to import sport-hunted polar bear trophies from Canada that are taken from approved subpopulations
- Canada is opposed to the House and Senate proposals to remove the 1994 amendments. A letter has been sent by the Canadian Ambassador to register Canada's views that the 1994 amendments should be maintained

Canadian Research Priorities…

- Scientific research and monitoring is fundamental to sound conservation of polar bears

- Canada has active research programs and supports research priorities recently identified by the IUCN/SSC Polar Bear Specialist Group (PBSG):
  - Monitoring and study of the effects of contaminants
  - Quantitative assessment of effects of climate warming
  - Maintaining harvests within sustainable limits

Research Priorities: Monitoring and study of the effects of contaminants…

- Polar bears are at the top of the marine food chain and can accumulate high levels of contaminants
- These contaminants may interfere with hormone regulation, immune system function, and possibly reproduction and survival
- New contaminants have recently been documented in polar bear tissues
  - Need to improve monitoring of contaminants

Research Priorities: Quantitative assessment of effects of climatic warming…

- Broad consensus among scientists that climate warming is causing changes to Arctic sea ice
- Impacts of climate warming are evident in two Canadian subpopulations, and declines in body condition have been documented in a third
- Need for increased monitoring of subpopulations as impacts of climate change occur at different rates and times in different regions
- Data needs to be collected on remaining Canadian sub-populations to assess if there are changes in sea ice habitat or polar bears, related to climate warming

Research Priorities: Maintaining harvests within sustainable limits…

- All Canadian subpopulations are harvested; accurate estimation of population size and demographic parameters are essential
- Ecological conditions in Arctic, subpopulation size, and demographic parameters can no longer be assumed as stable or predictable: more frequent inventories may be necessary
- Mark-recapture studies remain primary estimation method, but are expensive and time-consuming
- Need to develop alternative, less expensive estimation methods, to allow more frequent inventories or provide temporary checks between mark-recapture inventories

Traditional Ecological Knowledge (TEK)…

- Northerners have knowledge and expertise with respect to polar bears and the changing Arctic environment
  - TEK can contribute to polar bear conservation in areas such as behaviour, historical use of areas, seasonal fidelity, body condition of individuals, and potential disturbance from industrial activity

- Need to take better advantage of available TEK and local observations; determine the appropriate manner in which TEK is collected and presented; and, identify where TEK and science can best contribute to research and management

Canadian Successes…

- Process underway to develop a Canada-Greenland Agreement for shared populations
- Provinces and territories moving forward on developing inter-jurisdictional agreements for shared subpopulations
- Development of two user-to-user agreements for the shared management of the Southern Beaufort Sea, North Beaufort Sea and Viscount Melville Sound polar bear subpopulations.
- Regular updates of estimates of size of subpopulations as part of ongoing inventory programs
- Continued timely research on impacts of climate change on polar bears, genetics, and polar bear-sea ice ecological relationships
- Canada permits a controlled and regulated harvest of polar bear that includes high quality reporting of harvest; non-compliance with harvest regulations is not an issue.
  - Conservation officers in communities
  - Very small communities with limited access (air only)
  - Export permit required at airport

Canadian Challenges…

- Incorporation of scientific information and traditional ecological knowledge requires significant investment in resources and time to reach responsive co-management decision-making processes, particularly with respect to climate change impacts
- Incorporation of future environmental uncertainty and potential subpopulation instability in the existing harvest management system
- Development of alternative approaches for more frequent subpopulation size estimation
- Addressing opening of Arctic to resource development and tourism
- Reassessment process in Canada to include latest science and TEK in 2008
  - Federal listing decision to follow